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INSTRUCTIONAL TELEVISION IN THE
BROOKINGS, SOUTH DAKOTA,
ELEMENTARY SCHOOLS

BY

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A thesis submitted
in partial fulfillment of the requirements for the
degree Master of Arts, Major in
Journalism, South Dakota
State University

1972

INSTRUCTIONAL TELEVISION IN THE
BROOKINGS, SOUTH DAKOTA,
ELEMENTARY SCHOOLS

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South Dakota State University, 1972

Adviser: George H. Phillips

This study attempted to determine how extensively instructional television was used in the Brookings, South Dakota, elementary schools, and what factors contributed to its use. A questionnaire which asked the teacher's age, number of years taught, number of times instructional television was used per week, and attitudes about ITV is the basis of this study.

A brief history of public television in the United States and in South Dakota is also included.

INSTRUCTIONAL TELEVISION IN THE
BROOKINGS, SOUTH DAKOTA,
ELEMENTARY SCHOOLS

The author wishes to thank Dr. James Scotton
(on leave from South Dakota State University) for his
guidance and suggestions on this project. Dr. George
Phillips kindly offered further suggestions and advice
during Dr. Scotton's absence, and thanks go to him.

The Brookings elementary principals, Miss Mary
Green

This thesis is approved as a creditable and
independent investigation by a candidate for the degree
Master of Arts, and is acceptable as meeting the thesis
requirements for this degree, but without implying that
the conclusions reached by the candidate are necessarily
the conclusions of the major department.

Thesis Adviser

Date

Head, Department of Journalism Date
and Mass Communication

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The author wishes to thank Dr. James Scotton (on leave from South Dakota State University) for his guidance and suggestions on this project. Dr. George Phillips kindly offered further suggestions and advice during Dr. Scotton's absence, and thanks go to him.

The Brookings elementary principals, Miss Mary Greenwood at Hillcrest, and Mrs. Esther Solberg at Central, were most cooperative in letting the writer administer the questionnaire in their schools. The teachers who responded to the questionnaire also deserve recognition.

JMK

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CHAPTER I

INTRODUCTION

This paper intends to determine if instructional television is widely used in the Brookings, South Dakota, elementary schools. It also attempts to determine what attitudes Brookings elementary teachers have about instructional television.

Instructional television (ITV) is a modern-day teaching tool available and used in most schools. The cost to the individual school district is minimal after receiving sets have been purchased. Supplementary materials go with the programs and are available to the school from the public television station. A school may purchase any or none of the material it chooses. The advantages of instructional television are many, as will be discussed in Chapter III.

This writer became interested in ITV several years ago while serving as a substitute teacher in the Lincoln, Nebraska, public schools. The programs were good, for the most part, and interesting on a level the children could understand. Television sets were not available in the classroom, however. Students were taken to the school auditorium, which could seat several hundred. The sets were placed high on the

walls which made it necessary to hold one's head back to see the screens. The reader can easily imagine transporting 35 active junior high students down halls and stairways, seating them in a small corner of the large room, and trying to recreate a learning atmosphere and restore some semblance of classroom order. The course of least resistance, not taking them to watch the programs, was attractive.

In social conversation, one Brookings elementary teacher responded to this writer's question that she seldom used ITV--it was too much bother. Her statement was a reminder of the previous experience in substitute teaching, and was the beginning of this research project. Did her attitude pervade the whole school system? What were the reasons for her attitude. Was it really a "bother?" Weren't enough receiving sets or supplementary materials available? Were the programs dull and uninteresting or badly produced? Did the programs tie-in or complement the course of study?

Considerable reading preparation preceded the writing of the questionnaire. Many studies have been done on the effectiveness of television instruction in the classroom. The most comprehensive study done in the field was done indirectly by a famous researcher, Wilbur Schramm. Actually, his contribution was an extensive

review of the available research. His article called "Learning from Instructional Television," gave the following general conclusions about ITV:

There is no longer doubt that students learn efficiently from instructional television.

There is no significant difference in what a child can learn from instructional television and from ordinary classroom methods.

Students in elementary schools think they learn more from classroom television than high school and college students think they learn from watching the screen in the classroom.

Most teachers who have used instructional television for a number of years come to like it. Those who have used it seldom or not at all are suspicious of it and resistant to its use.¹

The Brookings study in this paper is preceded by a brief history of public television in the United States (Chapter II) and a brief history of public television in South Dakota (Chapter III) for the purpose of providing background information on instructional television.

¹ Wilbur Schramm, "Learning from Instructional Television," Review of Educational Research, 32: 156-167 (1962).

CHAPTER II

A BRIEF HISTORY OF PUBLIC TELEVISION IN THE UNITED STATES

In a sense, as John Meaney, Professor of Communication Arts at the University of Notre Dame, suggests, all of broadcast television is public. Just as our rivers and natural resources and the atmosphere are in the public domain, so are the broadcast channels that use air waves to transmit signals. Because of this use of public domain, broadcasting laws specify that all operations shall be "in the public interest, convenience, and necessity." Further, the programs that are broadcast are generally and freely receivable on sets owned by the general public.¹

Public television was born in the United States in April, 1952, when the Federal Communications Commission set aside 1/10 of the television channels for educational television. This reservation amounted to 242 channels: 80 VHF and 162 UHF.²

1 John W. Meaney, "The Institution of Public Television," Review of Politics, 30: 403 (October, 1968).

2 Meaney, p. 406.

The birth of public television was not unplanned, however, and the gestation period may go as far back as the early days of radio. Few people today realize the importance of the role of educators in developing radio. Land grant institutions, particularly in the midwest, set up experimental stations in physics laboratories during the early twenties. Many of these stations gave regular program services, particularly weather information and agricultural information programs. More than 120 of these low-frequency stations, operated by colleges and universities, were in existence in 1925.¹

The Radio Act of 1912 was the first domestic law for the regulation of radio. It provided for licensing stations and operators by the Secretary of Labor and the Secretary of Commerce. Public radio preceded commercial radio in its provisions. What is now WHA, the oldest noncommercial radio station in the country, was established in Madison, Wisconsin, in 1919.²

The Federal Communications Commission (FCC) was established in 1934, and it developed uniform regulations

1 Meaney, p. 404.

2 John W. Macy, Jr., "Public Broadcasting: A Medium in Search of Solutions," Law and Contemporary Problems, 24,3: 637 (Summer, 1969).

of commercial and noncommercial broadcasting. The FCC tried to secure mutual cooperation between the public service and commercial broadcasters, but these efforts mostly met with defeat.¹

When it became apparent that radio had great advertising potential, the commercial surge of its use was great. Regulations were few, and commercial stations came on the air with more power than the educators could afford. Interference and channel hopping were not unknown. This created chaos for the educational stations as well as other commercial stations. More than two-thirds of the educational stations had given up operation by the mid-thirties because of the frustration they experienced.²

AM educational radio had some successes, however. Two of these successes were Walter Damrosch's 1928 nationally popular music appreciation program and the broadcast of President Hoover's inauguration in 1929. The latter event caused many schools to install receiving sets.³

The wartime invention of FM radio interested the people from the 30 surviving educational radio stations,

1 Macy, p. 638.

2 Meaney, p. 404.

3 Meaney, p. 405.

and they requested and received a reservation of twenty FM channels from the FCC in 1945. The FCC located non-commercial broadcasting in the 88 to 92 megacycle range, where it remains today.¹

Commercial growth of FM radio has been surpassed by public radio stations on the FM band. As of August, 1971, there are 514 non-commercial radio stations. Of these, 104 qualify for Corporation for Public Broadcasting assistance.²

Radio today is characterized by its selective audiences for which the station does selective programming. Stations constantly promote themselves both over airways and through print media in their efforts to attract listeners.³

The reservation of FM frequencies set a precedent which was later followed in the reservation of television channels. When the freeze on television construction was ending after World War II there came a chance for educators to stake claims on television, and they were not slow to do so.

1 Macy, p. 638.

2 CPB Newsletter, August, 1971, p. 6.

3 Macy, p. 638.

The first noncommercial television station went on the air in May, 1953, when KUHT, licensed to the University of Houston and the Houston Board of Education, became the pioneer.

By 1960 there were 62 public television stations. It was then that a national production entity was created through Ford Foundation support. It became known as National Education Television (NET). Videotape provided most of the network with some film distribution by airplane. There were also limited experiments with electronic interconnection of NET affiliates.¹

Congress passed the Educational Television Facilities Act in 1962, which gave strong federal support for acquiring equipment to noncommercial television licensees. The act provided for grants to assist licensees in expansion of existing stations or construction of new stations. The money was made available on a 50/50 matching basis, and the federal share was to be spent on interconnection projects.²

The Carnegie Commission on Educational Television was appointed in 1964 by the Carnegie Corporation with the encouragement of President Johnson. The Commission felt that the name "Educational Television" was not

1 Macy, p. 638.

2 Macy, p. 638.

entirely accurate and might even have some social stigma attached to it. Hence, the distinction between public television and instructional television came into being. The report of the Carnegie Commission on Educational Television, Public Television, published in January of 1967, has this to say in making a distinction between public television and instructional television:

Although our Report deals primarily with what the Commission has chosen to call Public Television rather than instructional television, we believe it to be urgently in the public interest that both categories be extended and strengthened. . . .

The programs we conceive to be the essence of Public Television are in general not economic for commercial sponsorship, are not designed for the classroom, and are directed at audiences ranging from the tens of thousands to the occasional tens of millions. . . .¹

The Carnegie Commission on Educational Television recommended to President Johnson that a Corporation for Public Television be established not only to provide assistance to existing stations, ". . . but for a comprehensive system that will ultimately bring Public Television to all the people of the United States: a system

1 Carnegie Commission Report on Educational Television, Public Television: A Program for Action (New York: Bantam Books, 1967) p. 3.

that in its totality will become a new and fundamental institution in American culture."¹

Educational radio people got into the act during Congressional hearings, and what finally emerged was legislation entitled the Public Broadcasting Act which set up the new national Corporation for Public Broadcasting. This legislation was enacted and signed into law by President Johnson on November 7, 1967.²

Title I of the 1967 Public Broadcasting Act extended for three years the authority originally provided under ETV facilities legislation of 1962. It made public radio stations eligible for assistance for the first time. It increased to 75% (from 50%) the maximum allowable for federal matching funds, and eliminated restrictions on the federal share to be spent on station interconnection projects.

Title II provided for establishing the Public Broadcasting Corporation and gave it the authority to make grants to production groups to provide programming for the national network and for individual stations.

Title III of the 1967 act directed the Department of Health, Education, and Welfare to make a study

1 Carnegie Commission, p. 4.

2 Meaney, p. 404.

of instructional television and allocated \$500,000 for the project.¹

The passage of the Public Broadcasting Act by Congress changed the focus of educational television to public television. The new organization included both educational radio and educational television. The act provided an authorization of \$9 million for the fiscal 1968, but no funds were released that year and in fiscal 1969 appropriations for public broadcasting totaled \$5 million.²

Hyman H. Goldin, Associate Professor of Communications, Boston University, and former Executive Secretary of the Carnegie Commission on Educational Television, says that the central shortcoming of educational broadcasting is its abject poverty. He compares the resources of commercial television with public television. The latter survives on less than three per cent of commercial broadcasting expenditures. Procter and Gamble's TV budget is more than twice the annual support for all public television stations over a year's time.³

1 Macy, pp. 639-41.

2 Macy, p. 637.

3. Hyman H. Goldin, "Financing Public Broadcasting," Law and Contemporary Problems, 24, 3: 651 (Summer, 1969).

Many suggestions for funding public broadcasting have been made. Fear that annual congressional appropriations could lead to censorship on the part of elected officials, made the Carnegie Commission try to devise some means for obtaining at least part of the funds for the Corporation for Public Broadcasting from sources that would have less congressional control. One suggestion was an excise tax on radio and television receiving sets at the manufacturer or importer level for the Corporation's use. The Carnegie Commission estimated that \$100 million should be the annual goal for programming. The Commission indicated that the money necessary for plant and operating expenses for Public Broadcasting would be provided through the Department of Health, Education, and Welfare. It would move along the normal appropriation procedures, hopefully without too much involvement by the government in the content of broadcasts on public television.¹

Objections to the excise tax include the objection that it is regressive--the poor pay as much as the rich--and that as the sale of color sets levels off, it will no longer be a major source of revenue.

1 Goldin, p. 654-5.

Other suggestions for revenue include the suggestion by The Economist, a British weekly, that CPB could advertise on the European pattern. The advertisers are denied any voice over the material surrounding their commercials. The advertising spots are gathered into "tidy groups."¹

Many foreign countries finance their public broadcasting with annual taxes on receiving sets. This has not yet been suggested as a solution in this country, probably, as Meaney suggests, Americans would think it a step backwards. Meaney makes an interesting observation that many nations in the Western tradition ". . . may achieve somewhat comparable television services, albeit by different approaches. Many of them have begun with public broadcasting and, as England and Canada have done, have added commercial services later. We . . . began with the commercial system and are now adding the public one."²

As of this writing, John Macy, Jr., President of the Corporation for Public Broadcasting, still must depend on annual congressional appropriations for running his organization. President Nixon has signed an appropriations

1 The Economist, "Spotless TV," Dec. 21, 1968, p. 32.

2 Meaney, p. 412.

bill which authorizes \$35 million for the CPB for the fiscal year 1972.¹

Because of the issues involved, the dilemma of financing public broadcasting has no ideal solution. Goldin says that the issues". . . are primary democratic values: on the one hand, a truly free press and, on the other, Congressional responsibility for the expenditure of federal funds."²

A great deal of support for CPB comes from private sources. The Ford Foundation and the Carnegie Corporation have both been long-time supporters of public television. But, Goldin says that "Contrary to popular belief, the main support of educational stations is government. State and local governments and state universities accounted for half of station funds in 1967, and the federal government contributed another ten per cent. General public and business support is disappointingly low. . . ."³

As of September 5, 1971, there were 211 stations in the Public Broadcasting System network.⁴

1 Newsletter, Corporation for Public Broadcasting, Vol. 3, No. 5 (August, 1971), p. 3.

2 Goldin, p. 654.

3 Goldin, p. 635.

4 CPB Memo, Vol. 2, No. 26, (September 13, 1971), p. 1.

Total operating costs for public television in 1970 were \$83,677,000 and public radio costs were \$8,581,000.¹

Interest in public television ~~continues to grow~~^{quickly}. Children's programs such as "Sesame Street" and "The Electric Company" enjoy large viewer audiences^{even yet today.}. These programs are well researched and planned. It is hoped that instructional television will receive similar attention in the near future so classroom viewing will share comparable quality with these programs.

¹ Newsletter, CPB, p. 6.

CHAPTER III

PUBLIC TELEVISION IN SOUTH DAKOTA

Public television offers many attractive things to South Dakotans. Because of the relative isolation of states in the Midwest, television can expose students in the classroom to things they would otherwise miss. Television can also provide instruction in certain areas where teacher shortages and teacher training inadequacies exist. Television sets in classrooms may also make up for a shortage of suitable audio-visual equipment and teaching aids. Of course, adult education and enjoyment of the cultural programs of public television are other attractive features for South Dakotans.

A group of private citizens met in July, 1960, and began the first continuing efforts to create general public interest in the educational uses of television. This group assisted in the formation of the Joint Committee on Educational Television.

The Joint Committee on Educational Television was established in late 1960 and in early 1961 it began functioning. It was composed of representatives of The Midwest Educational Television Network Project (The Six-State Network), The South Dakota Board of Regents, The

South Dakota Board of Education, and the Association of Private Colleges of South Dakota. This committee was instrumental in arranging the first hearings on statewide educational television in the South Dakota Legislature, and helped secure passage of a 1961 bill requesting a comprehensive study of the potential for educational television in South Dakota. The Joint Committee remained active until the South Dakota Educational Television Association was formed in 1963.¹

The South Dakota Educational Television Association was formally incorporated by the State of South Dakota in 1963. Its membership is made up of representatives from the Board of Regents, the State Board of Education, the South Dakota Education Association, the Association of Private Colleges of South Dakota, the Associated School Boards of South Dakota, the American Association of University Women, the South Dakota Congress of PTA, The State Consultant to the Six-State Network Project, one representative of the operating ETV stations, and one representative of the closed circuit systems. The President of the Association is an Ex-officio member of

¹ First Annual Report of the South Dakota Educational Television Board, July 1, 1966 to June 30, 1967, p. 5.

the ETV Board. The main purposes of the Association are to encourage, promote and assist with the development of an ETV Network in the state, to conduct studies and analyses of the uses of ETV, to accept public and private funds, and to acquaint the citizens of South Dakota with the possibilities of ETV.

Some notable contributions of this Association in the early stages of development of ETV in South Dakota were: reserving additional ETV channels; conducting and publishing a state-wide ETV study with private money raised and matching funds obtained; having promoted legislation establishing the South Dakota ETV Board and having provided the first state matching money to begin the South Dakota network.¹

The South Dakota 1965 legislature established the South Dakota Board of Directors for ETV. The board is made up of seven members and is entirely responsible for coordination of ETV activity in the state. It is the controlling body of monies that are appropriated for the development of the South Dakota network of ETV stations. The board also acts in an advisory capacity in all ETV matters and has two operational responsibilities.

1 First Annual Report of the SDETV Board, p. 6.

As of July 1, 1967, it has the responsibility of establishing a network staff, and it operates as the licensee for all ETV stations of the network in South Dakota with the exception of the two university stations--KUSD at Vermillion, and KESD at Brookings.¹

The South Dakota Instructional Television (ITV) Council has been authorized by the South Dakota ETV Board to be the television programming agency for the public and private schools, kindergarten through twelfth grades. The ITV Council is made up of representatives from independent school districts in the state. All school districts are entitled to one representative. Schools having 1,000 to 5,000 pupils have two representatives; 5,000 to 10,000 have three representatives; and over 10,000 pupils, four representatives. Private schools also have representation on the same per pupil basis as independent school districts. Courses and times chosen by the ITV Council are subject to the final approval of the ETV Board.²

South Dakota now has five public television stations--KUSD at Vermillion is owned by the University of South Dakota; KESD at Brookings is owned by South Dakota State University. Stations at Rapid City, Aberdeen

1 First Annual Report of the SDETV Board, pp. 6-7.

2 First Annual Report of the SDETV Board, p. 7.

and Pierre are owned and operated by the South Dakota ETV Board. A sixth station at Faith is scheduled to be operating soon. A seventh station in Bennett County is planned if sufficient funds can be made available.¹

KESD at Brookings began operating February 5, 1968. Funds for operating the television station come from grants from the Corporation for Public Broadcasting and from the State Legislature of South Dakota through South Dakota State University.²

Most of the instructional television programs are provided for South Dakota on leased tapes. South Dakota has produced two good programs of its own, however. Mrs. Dianna Tollefson's "Draw With Me" and "Just Imagine" are produced for South Dakota schools at KUSD studios in Vermillion. These programs have been well received and liked. The Minnesota ITV network also uses these programs, and in return South Dakota gets a music series from Minnesota.³

1 Conversation with Woodrow Wentzy, KESD Staff.

2 Wentzy, private conversation.

3 Wentzy, private conversation.

CHAPTER IV

A STUDY OF TEACHER ATTITUDES AND USE OF ITV IN THE BROOKINGS ELEMENTARY SCHOOLS

Methodology

Brookings, South Dakota, is a university community of 13,000 in the east-central part of the state. It has two elementary schools which operate on a kindergarten through fifth grade system.

The questionnaire which serves as the basis for this study was pre-tested in the Volga, South Dakota, Elementary School two weeks before it was distributed to the Brookings elementary teachers. The pre-test did not indicate that any questions in the attitude study were invalid, so the questionnaire was distributed in the same form as it existed in the pre-test.

The questionnaire was placed in the mail boxes of each teacher (rather than distributed at a teacher's meeting as the writer had originally planned--the Central principal requested this manner of distribution) on May 24, 1971. A receptacle was placed in each principal's office for the completed questionnaires, and they were collected on June 2, 1971.

Returns of questionnaires at the two schools are comparable. Central school had 22 teachers who could use ITV, and 18 questionnaires were returned, a percentage of 81.9%. Hillcrest school had 21 teachers who could use ITV and 15 questionnaires were returned, a percentage of 71.4%. Central teachers returned 10.5% more questionnaires than Hillcrest teachers returned.

The data from the questionnaires was placed on a master sheet and programmed on computer cards. A frequency distribution computer was used to count and determine percentages of the returns. Since the universe (Brookings elementary teachers) being examined was so small, it was decided to do no further statistical analysis of the data than the simple percentage analysis.

The data was analyzed by schools, to determine if a difference in ITV use and teacher attitudes existed between the two schools. Then, the combined data was analyzed by the computer to get an over-all picture. The data was also processed according to age groups of the teachers to determine if age and teaching experience affected teacher attitudes and use of ITV.

The Questionnaire

The questionnaire, as it was given, appears in the appendix of this paper.

Six Central teachers answered age, number of years taught, grade taught, and indicated they did not use ITV. They then did not respond to the rest of the questionnaire. The reader should be aware of these six responses, as they appear in every table in this analysis.

Respondents' Age

For purposes of easier analysis of age data, three categories were chosen for the computer program. Those three categories were: 30 and under; 31-45; and 45-60. None of the respondents gave their age as being over 60.

Central Elementary School's teachers average a younger age than do Hillcrest's. Six of the 18 respondents from Central are in the 30 and under category, or 33.33% of the respondents. Seven Central teachers fall in the 31-45 age category, or 38.89%. Four are in the 46-60 age category, or 22.22%. One teacher did not give her age.

No respondents from Hillcrest fell in the age category 30 and under. One teacher indicated that her age was between 31-45, or 6.67%. Eight teachers were in the 46-60 year group, or 53.33%. Six teachers did not give their age, or 40%. This latter figure is disappointing, because it makes age-attitude analysis difficult.

Number of Years Taught

The number of years taught was programmed in three categories. Less than ten years was category one, 10-19 years was category two, and 20-30 years was category three. No teachers in the two schools had taught longer than 30 years.

Eight Central teachers had taught less than ten years, or 44.44%. Two had taught from 10-19 years, or 11.11%. Eight had taught from 20-30 years, or 44.44%.

No teachers at Hillcrest who answered the questionnaire had taught less than ten years. Four answered that they had taught from 10-19 years, or 26.67%, and seven said they had taught from 20-30 years, or 46.67%. Four teachers failed to respond to the question, or 26.67%.

By comparison, 55.55% of Central respondents fall in the two more experienced categories, and 73.34% of Hillcrest respondents are in the same categories.

Grades Taught by Respondents

One kindergarten teacher at Central responded to the questionnaire as did one first-grade teacher, one second-grade teacher, two third-grade teachers, three fourth-grade teachers, three fifth-grade teachers and six teachers from the non-graded system, and the special

education teacher. One teacher failed to indicate what grade she taught.

Two kindergarten teachers at Hillcrest answered the questionnaire as did one first-grade teacher, one second-grade teacher, three third-grade teachers, four fourth-grade teachers and three fifth-grade teachers. One teacher did not indicate which grade she taught.

Since more teachers of higher grades at both schools responded to the questionnaire, it may indicate more interest and usefulness of ITV in the third, fourth, and fifth grades.

Non-graded teachers at Central commented that they often had difficulty in scheduling the ITV programs into their day because their own schedules were very flexible and changed from day to day.

Number of ITV Programs Viewed

Question 1 of the questionnaire asked teachers to estimate the number of ITV programs watched in the classroom per week. The maximum number of programs for any one grade for a week is five. Three teachers at Central used TV once a week, two used it twice a week, two used it three times a week, one used it five times a week, and ten teachers did not use Instructional Television at all. Comments at the end of the questionnaires were helpful in

analyzing why 55.55% of Central's respondents did not use ITV. Reception was very poor in one of Central's buildings, according to many teachers. This apparently was allowed to go uncorrected for most of the school year. Other teachers commented that the time between ITV programs was so short that moving the TV sets from room to room between programs was difficult. In some cases, children had to be moved from their own room to watch the programs, and teachers felt that this was upsetting to classroom routine and time consuming.

Four Hillcrest respondents indicated they used ITV once a week, eight said they used it twice a week, and two marked three times a week. One teacher said she did not use it at all. By comparison, then, ITV was used at Hillcrest by 93.33% of the respondents and at Central by 44.44% of the respondents.

The most frequently used TV programs was twice per week, or ten respondents from the two schools, accounting for 30.3%. One program viewing per week was second most frequent, or seven respondents--21.21% Four respondents, or 12.12% used the ITV programs three times per week.

Of the six respondents in age-group one, three did not use ITV at all, and one each used it two, three and five times per week. Of the eight respondents in age-group two, three used it once a week, five did not use

it at all. In age-group three, three people used it once a week, four used it twice a week, and two used it three times per week. Three in age-group three did not use instructional television. In the group of seven respondents that did not give their ages one person used ITV once a week, five used it twice a week and one used it three times during the week.

Students That Profit Most and Least from ITV

Questions 2 and 17 of the questionnaire are similar. Question 2 asks the respondents to indicate whether fast learners, average learners or slow learners profit most from ITV. Question 17 asks respondents to indicate which students in the same categories profit least from instructional television.

Eight respondents did not answer question two, or 24.24%. Four, or 12.12%, felt that fast learners profited most. Six, or 18.18% felt that average learners profited most. Seven respondents, or 21.21%, thought slow learners gained the most from ITV. Eight respondents, or 24.24%, gave other answers or qualified the answers they gave. One teacher qualified her answer and said that learning depended on the program, not ITV in general. The special education teacher indicated that visual learners gain the most from classroom television. Many of the eight who

gave other answers indicated that learning abilities did not have a noticable relationship to learning resulting from watching classroom TV. With no more variation than this, it is not possible to say which group profits most from instructional television.

Question 17 asks which group profits least from ITV. Eight teachers, 24.24%, did not answer the question. Nine, or 27.27%, indicated that fast learners profited least. Four, or 12.12%, said average learners profited least. Eight, or 24.24% felt that slow learners gained least from classroom television. Four, or 12.12%, wrote other answers. One teacher said that "It (ITV) can't always appeal to a certain group." Another respondent in this category said, "No certain group."

Question 17 was intended as a cross check with question 2. Question 17 indicates that average learners may fare best from instructional television.

Attitude Scale on Questionnaire

Questions 3-16 were answered on a five-point attitude scale. Respondents were asked to check one of the following five: (1) Agree Strongly, (2) Agree, (3) No Opinion, (4) Disagree, (5) Disagree Strongly. Questions 8, 9, 13, and 14 were so constructed that a

response to "disagree" or "disagree strongly" would be a positive response.

For purposes of deciding whether responses are positive or negative, +2 and +1 are assigned to the positive responses, and -1 and -2 are assigned for the negative responses, the two's in both cases being the strong response. A 0 represents "no opinion."

Questions 3-16 have been organized in table form for easier reading.

TABLE 1

PERCENTAGE ANALYSIS OF QUESTION 3

Instructional television is a major resource for classroom teachers.

Groups	+2	+1	0	-1	-2	No Answer
Central	0	4 22.22%	4 22.22%	3 16.67%	1 5.56%	6 33.33%
Hillcrest	0	4 26.67%	4 26.67%	7 46.67%	0	0
Both Schools	0	8 24.24%	8 24.24%	10 30.30%	1 3.03%	6 18.18%
Age-Group 1	0	2 33.33%	1 16.67%	1 16.67%	0	2 33.33%
Age-Group 2	0	1 12.50%	2 25.00%	2 25.00%	0	3 37.50%
Age-Group 3	0	4 33.33%	4 33.33%	3 25.00%	0	1 8.33%
No Age Given	0	1 14.29%	1 14.29%	4 57.14%	1 14.29%	0

Three more negative responses were given on this question, than positive responses. The differences in response according to age groups is not sufficient to have meaningful measurement.

TABLE 2

PERCENTAGE ANALYSIS OF QUESTION 4

Materials supplied to supplement the programs are useful and tie in with material used in the classroom.

Groups	+2	+1	0	-1	-2	No Answer
Central	0	3 16.67%	4 22.22%	2 11.11%	0	6 33.33%
Hillcrest	1 6.67%	5 33.33%	3 20.00%	5 33.33%	0	0
Both Schools	1 3.03%	8 24.24%	7 21.21%	7 21.21%	0	6 18.18%
Age-Group 1	0	2 33.33%	0	0	0	2 33.33%
Age-Group 2	0	1 12.50%	3 37.50%	0	0	3 37.50%
Age-Group 3	1 8.33%	4 33.33%	3 25.00%	3 25.00%	0	1 8.33%
No Age Given	0	1 14.29%	1 14.29%	4 57.14%	0	0

Four teachers wrote in their own answers to this question. This accounts for discrepancy in totals. Most indicated that they did not have easy access to materials.

TABLE 3

PERCENTAGE ANALYSIS OF QUESTION 5

The approach of instructional television is geared to the child's needs and learning ability.

Groups	+2	+1	0	-1	-2	No Answer
Central	2 11.11%	6 33.33%	4 22.22%	0	0	6 33.33%
Hillcrest	0	14 93.33%	1 6.67%	0	0	0
Both Schools	2 6.06%	20 60.61%	5 15.15%	0	0	6 18.18%
Age-Group 1	2 33.33%	2 33.33%	0	0	0	2 33.33%
Age-Group 2	0	3 37.50%	2 25.00%	0	0	3 37.50%
Age-Group 3	0	9 75.00%	2 16.67%	0	0	1 8.33%
No age Given	0	6 85.71%	1 14.29%	0	0	0

Of the 27 who responded to this question, 22 indicated positive attitudes, or 81.50%.

TABLE 4

PERCENTAGE ANALYSIS OF QUESTION 6

The teacher should follow instructional television classes with supplementary materials and make an effort to have the television class a worthwhile learning experience.

Groups	+2	+1	0	-1	-2	No Answer
Central	4 22.22%	7 38.89%	1 5.56%	0	0	6 33.33%
Hillcrest	4 26.67%	11 73.33%	0	0	0	0
Both Schools	8 24.24%	18 54.55%	1 3.03%	0	0	6 18.18%
Age-Group 1	3 50.00%	1 16.67%	0	0	0	2 33.33%
Age-Group 2	1 12.50%	3 37.50%	1 12.50%	0	0	3 37.50%
Age-Group 3	3 25.00%	8 66.67%	0	0	0	1 8.33%
No Age Given	1 14.29%	6 85.71%	0	0	0	0

Positive attitude responses were given by 96.29% of those who answered the question.

TABLE 5

PERCENTAGE ANALYSIS OF QUESTION 7

Instructional television motivates children to read and study more.

Groups	+2	+1	0	-1	-2	No Answer
Central	1 5.56%	4 22.22%	5 27.78%	2 11.12%	0	6 33.33%
Hillcrest	1 6.67%	9 60.00%	3 20.00%	2 13.13%	0	0
Both Schools	2 6.06%	13 39.39%	8 24.24%	4 12.12%	0	6 18.18%
Age-Group 1	1 16.67%	2 33.33%	1 16.67%	0	0	2 33.33%
Age-Group 2	0	0	3 37.50%	2 25.00%	0	3 37.50%
Age-Group 3	1 8.33%	7 58.33%	2 16.67%	1 8.33%	0	1 8.33%
No Age Given	0	4 57.14%	2 28.57%	1 14.29%	0	0

Of the teachers that answered this question, 55.55% responded positively, 14.96% responded negatively, and 29.49% expressed no opinion.

TABLE 6

PERCENTAGE ANALYSIS OF QUESTION 8

Instructional television disrupts classroom organization.

Groups	-2	-1	0	+1	+2	No Answer
Central	1 5.56%	1 5.56%	2 11.11%	4 22.22%	4 22.22%	6 33.33%
Hillcrest	0	2 13.33%	1 6.67%	10 66.67%	2 13.33%	0
Both Schools	1 3.03%	3 9.09%	3 9.09%	14 42.42%	6 18.18%	6 18.18%
Age-Group 1	0	0	0	1 16.67%	3 50.00%	2 33.33%
Age-Group 2	0	2 25.00%	1 12.50%	1 12.50%	1 12.50%	3 37.50%
Age-Group 3	1 8.33%	0	2 16.67%	7 58.33%	1 8.33%	1 8.33%
No Age Given	0	1 14.29%	0	5 71.43%	1 14.29%	0

Note that the scale on this question is the reverse of the previous order since the question was worded negatively. Twenty of the twenty-seven teachers who answered this question gave positive responses, or 74.07%.

TABLE 7

PERCENTAGE ANALYSIS OF QUESTION 9

Scheduling instructional television into the day's activities is difficult.

Groups	-2	-1	0	+1	+2	No Answer
Central	1 5.56%	2 11.11%	2 11.11%	5 27.78%	2 11.11%	6 33.33%
Hillcrest	0	7 46.67%	1 6.67%	7 46.67%	0	0
Both Schools	1 3.03%	9 27.27%	3 9.09%	12 36.36%	2 6.06%	6 33.33%
Age-Group 1	0	0	1 16.67%	1 16.67%	2 33.33%	2 33.33%
Age-Group 2	0	2 25.00%	1 12.50%	2 25.00%	0	3 37.50%
Age-Group 3	1 8.33%	5 41.67%	1 8.33%	4 33.33%	0	1 8.33%
No Age Given	0	2 28.57%	0	5 71.43%	0	0

This table, as with that for question eight, also has the negative responses listed first. Positive attitudes are expressed by 51.85% of the respondents.

TABLE 8

PERCENTAGE ANALYSIS OF QUESTION 10

Using instructional television allows the teacher to give more individual attention to students.

Groups	+2	+1	0	-1	-2	No Answer
Central	0	2 11.11%	3 16.67%	5 27.78%	1 5.56%	6 33.33%
Hillcrest	0	0	2 13.33%	12 80.00%	1 6.67%	0
Both Schools	0	2 6.06%	5 15.15%	17 51.52%	2 6.06%	6 18.18%
Age-Group 1	0	2 33.33%	1 16.67%	1 16.67%	0	2 33.33%
Age-Group 2	0	0	2 25.00%	2 25.00%	0	4 50.00%
Age-Group 3	0	0	2 16.67%	7 58.33%	2 16.67%	1 8.33%
No Age Given	0	0	0	7 100%	0	0

Teachers who responded to the question gave negative responses in 70.37% of the cases, indicating that instructional television is not necessarily a time-saver.

TABLE 9

PERCENTAGE ANALYSIS OF QUESTION 11

Teachers should not be required to use instructional television.

Groups	+2	+1	0	-1	-2	No Answer
Central	1 5.56%	8 44.44%	2 11.11%	1 5.56%	0	6 33.33%
Hillcrest	0	6 40.00%	4 26.67%	5 33.33%	0	0
Both Schools	1 3.03%	14 42.42%	6 18.18%	6 18.18%	0	6 18.18%
Age-Group 1	0	3 50.00%	0	1 16.67%	0	2 33.33%
Age-Group 2	0	4 50.00%	1 12.50%	0	0	3 37.50%
Age-Group 3	1 8.33%	3 25.00%	4 33.33%	3 25.00%	0	1 8.33%
No Age Given	0	4 57.14%	1 14.29%	2 28.57%	0	0

Of the teachers that answered this question, 55.55% felt that the use of instructional television should be the choice of the teacher.

TABLE 10

PERCENTAGE ANALYSIS OF QUESTION 12

Students encounter learning experiences in instructional television that they might otherwise miss.

Groups	+2	+1	0	-1	-2	No Answer
Central	5 27.78%	4 22.22%	2 11.11%	1 5.56%	0	6 33.33%
Hillcrest	2 13.33%	12 80.00%	0	1 6.66%	0	0
Both Schools	7 21.21%	16 48.48%	2 6.06%	2 6.06%	0	6 18.18%
Age-Group 1	2 33.33%	1 16.67%	1 16.67%	0	0	2 33.33%
Age-Group 2	1 12.50%	3 37.50%	1 12.50%	0	0	3 37.50%
Age-Group 3	3 25.00%	8 66.67%	0	0	0	1 8.33%
No Age Given	1 14.29%	4 57.14%	0	2 28.57%	0	0

Positive attitudes were indicated by 85.18% of the teachers that answered this question.

TABLE 11

PERCENTAGE ANALYSIS OF QUESTION 13

Instructional television costs taxpayers too much money.

Groups	-2	-1	0	+1	+2	No Answer
Central	1 5.56%	0	6 33.33%	3 16.67%	2 11.11%	6 33.33%
Hillcrest	0	2 13.13%	4 26.67%	8 53.33%	0	1 6.67%
Both Schools	1 3.03%	2 6.06%	10 30.30%	11 33.33%	2 6.06%	7 22.31%
Age-Group 1	0	0	2 33.33%	1 16.67%	1 16.67%	2 33.33%
Age-Group 2	0	0	4 50.00%	1 12.50%	0	3 37.50%
Age-Group 3	1 8.33%	1 8.33%	3 25.00%	5 47.67%	1 8.33%	1 8.33%
No Age Given	0	1 14.29%	1 14.29%	4 57.14%	0	1 14.29%

Negative responses are listed first in this table. Fifty per cent of the 26 teachers that responded to this question expressed positive attitudes, and 11.54% felt that ITV does cost taxpayers too much.

TABLE 12

PERCENTAGE ANALYSIS OF QUESTION 14

Using instructional television requires too much preparation and follow-up time for the teacher.

Groups	-2	-1	0	+1	+2	No Answer
Central	0	0	2 11.11%	9 50.00%	1 5.56%	6 33.33%
Hillcrest	0	1 6.67%	1 6.67%	13 86.67%	0	0
Both Schools	0	1 3.03%	3 9.09%	22 66.67%	1 3.03%	6 18.18%
Age-Group 1	0	0	1 16.67%	2 33.33%	1 16.67%	2 33.33%
Age-Group 2	0	0	1 12.50%	4 50.00%	0	3 37.50%
Age-Group 3	0	1 8.33%	1 8.33%	9 75.00%	0	1 8.33%
No Age Given	0	0	0	7 100%	0	0

Negative responses are listed first in this table. Positive attitudes were expressed by 85.18% of the teachers who responded to this question.

TABLE 13

PERCENTAGE ANALYSIS OF QUESTION 15

Teachers should be encouraged to use instructional television.

Groups	+2	+1	0	-1	-2	No Answer
Central	3 16.67%	4 22.22%	4 22.22%	1 5.56%	0	6 33.33%
Hillcrest	0	13 86.67%	2 13.33%	0	0	0
Both Schools	3 9.09%	17 51.52%	6 18.18%	1 3.03%	0	6 18.18%
Age-Group 1	2 33.33%	0	1 16.67%	1 16.67%	0	2 33.33%
Age-Group 2	0	3 37.50%	2 25.00%	0	0	3 37.50%
Age-Group 3	1 8.33%	7 58.33%	3 25.00%	0	0	1 8.33%
No Age Given	0	7 100%	0	0	0	0

According to 74.07% of the respondents to this question, teachers should be encouraged to use instructional television.

TABLE 14

PERCENTAGE ANALYSIS OF QUESTION 16

More research should be done by instructional television on techniques that work well for TV teaching.

Groups	+2	+1	0	-1	-2	No Answer
Central	3 16.67%	8 44.44%	1 5.56%	0	0	6 33.33%
Hillcrest	1 6.67%	13 86.67%	1 6.67%	0	0	0
Both Schools	4 12.12%	21 63.64%	2 6.06%	0	0	6 18.18%
Age-Group 1	1 16.67%	3 50.00%	0	0	0	2 33.33%
Age-Group 2	1 12.50%	3 37.50%	1 12.50%	0	0	3 37.50%
Age-Group 3	2 16.67%	8 66.67%	1 8.33%	0	0	1 8.33%
No Age Given	0	7 100%	0	0	0	0

More research should be done for ITV, according to 92.59% of the teachers who answered the question.

Question 17

Question 17 was discussed along with question 2 on pages 27 and 28.

Question 18

How often do you use ITV this year compared to last? (Do not answer if you are a first-year teacher.)

Respondents were asked to indicate "More often," "About the same amount," or "Less often." Eight teachers did not answer the question, accounting for 24.24%. Two respondents, 6.06%, indicated that they used it more. Fifteen, or 45.45%, said they used it about the same amount. Eight, or 24.24% said they used it less than the year before.

TABLE 15

PERCENTAGE ANALYSIS OF QUESTION 19

Rate the types of programs 1, 2, 3, 4, 5, according to the way you think children prefer them: 1 being most preferable, 5 least. The programs were listed as they appear on the table.

Programs	1	2	3	4	5	No Answer
Science	6 18.18%	8 24.24%	2 6.06%	1 3.03%	2 6.06%	14 44.44%
Language	6 18.18%	6 18.18%	7 21.21%	1 3.03%	4 12.12%	9 27.27%
Art	6 18.18%	3 9.09%	7 21.21%	6 18.18%	1 3.03%	10 30.30%
Music	4 12.12%	0	0	6 18.18%	7 21.21%	16 48.48%
Social Science	4 12.12%	0	0	6 18.18%	7 21.21%	16 48.48%

Several teachers rated only the programs they used. This accounts for the large numbers in the "no answer." Science programs received the largest number of one's and two's. Social Science and music received the greatest number of "no answers." The Brookings schools have their own music programs.

TABLE 16

PERCENTAGE ANALYSIS OF QUESTION 20

Rate subjects you think are most successfully taught by using ITV: 1 being most successful, 5 least successful.

Programs	1	2	3	4	5	No Answer
Science	5 15.15%	7 21.21%	5 15.15%	2 6.06%	1 3.03%	13 39.39%
Language	10 30.30%	3 9.09%	3 9.09%	0	1 3.03%	16 48.48%
Art	1 3.03%	4 12.12%	8 24.24%	3 9.09%	3 9.09%	14 42.42%
Music	1 3.03%	2 6.06%	1 3.03%	6 18.18%	5 15.15%	18 54.54%
Social Science	8 24.24%	8 24.24%	1 3.03%	2 6.06%	2 6.06%	12 36.36%

The large numbers in the "no answer" column are accounted for by the fact that many teachers rated only the programs they used. Social science programs rated highest in this question, followed closely by language and science.

Question 21

Do you have a television set in your room?

Hillcrest teachers have enough sets available that they are moved from room to room and children are kept in their own classroom. Many teachers commented that time between programs was not long enough to get the sets from one room to the next.

Central teachers share TV sets between rooms.

Question 22

Do you have to take your students to another room to watch instructional television?

Central teachers do take their children to other rooms on an alternating weekly basis. Hillcrest teachers keep their children in their own rooms.

The purpose of questions 21 and 22 was to determine if physical problems related to ITV watching made it less useable. It is believed that it does, since the Central teachers had more of a handicap as far as available sets was concerned. They were also handicapped by poor reception.

Question 23

Do you have to share supplementary materials and guide books for ITV with other teachers? If yes, how

many teachers share the material? Hillcrest teachers indicated that they do not have to share their materials.

Seven Central teachers did not answer the question. Four teachers said they did not have to share materials. Four said they shared materials with as many as three other teachers. A kindergarten teacher said she did not have materials for the programs she used.

ITV materials are available to the schools at small costs. Each school is responsible for obtaining the materials.

Comments by Teachers

Possibly the most useful and enlightening part of this questionnaire was the space provided for teacher comments. Several teachers responded to the chance to give their views about ITV and their teaching situation.

Central Teachers' Comments

"The programs were on days we found it difficult to schedule them to a good advantage."

"No TV set available for regular scheduling."

"Bad reception in primary building."

"Last year we tried to use ITV in math, art, and science. The reception in our building was so poor (unpredictable) that I decided not to use it this year."

Preparing the children for a program only to find we couldn't see or hear it, was not only disappointing to them, but a waste of time."

"We have very poor reception. The children become restless when watching the TV."

"We use very little TV in our team teaching. Prior to this, I used science and thought it to be very beneficial."

"We have really enjoyed TV this year, and so have the children."

"We do not have an ideal situation."

"As I see it, the cost of ITV could be used to better advantage in our state."

Hillcrest Teachers' Comments

"Drawbacks: not coordinated with the curriculum; too many rooms using the same set; most children are used to color--black and white detracts from interest."

"I believe most schools could have the programs continue a week or two longer in the spring."

"For first grade, the art program moves too fast and the instructor talks over their heads."

"TV must be related to the units of study being taught. TV does bring experiences to the classroom that

the teacher can't provide. TV adds to an already overloaded school day."

"In some instances we have trouble getting our TV set up on time because it has been used the previous period in another part of the building. It would help if the TV schedules were set up earlier."

"It would be nice if the programs could coordinate more with the curriculum."

"This year the programs were scheduled too close (not five minutes between programs as in other years) so it was very difficult to get the set from one room to the other."

"Get some new, better language programs."

"Wish we could use it more but other courses of study that don't use ITV have been adopted instead."

"We used ITV and liked it very much for our science, but Triple A science was offered instead (not because it was better or cheaper). I feel the key to science TV is the introduction and way the teacher handles the enthusiasm and follow-up of each program."

Conclusions

Of the 14 attitude statements on the questionnaire, the Central and Hillcrest teachers responded percentage-wise with 12 positive responses and two negative responses. Attitudes were not markedly different between the two schools. It can be concluded that the attitude toward instructional television is favorable in the Brookings elementary schools.

Comparison of attitudes by age groups did not reveal any significant differences in this study. There may be a number of reasons for this. Hillcrest's teachers fell in the two older categories, leaving no younger group to compare with them. It was unfortunate that a significantly large number of teachers did not give their ages, also making an age-attitude study unreliable. Viewing problems at Central appear to overrule any attitude-age discrepancy there. Nevertheless, the attitude-age statistics appear on the tables in this study.

Hillcrest teachers use ITV more than do Central teachers.

ITV appears to be used more in grades three, four, and five, than in first and second grade.

Television is an effective modern day teaching tool. Teacher attitudes about instructional television can influence its use in the classroom. Physical problems, such as the availability of sets and set reception are greater obstacles for Brookings teachers in using instructional television as this study points out.

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APPENDIX

Questionnaire

QUESTIONNAIRE

Please do not write your name.

Age _____

Number of years taught _____

Grade now teaching _____

Answer the following questions by marking a check in the appropriate place.

1. Estimate the number of programs your classroom watches on instructional television per week.

5	4	3	2	1	none
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2. What group or groups of students do you feel profit most from classroom television?

Fast learners	Average learners	Slow learners
---------------	------------------	---------------

3. Instructional television is a major resource for classroom teachers.

Agree Strongly	Agree	No Opinion	Disagree	Disagree Strongly
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4. Materials supplied to supplement the programs are useful and tie in with material used in the classroom.

Agree Strongly	Agree	No Opinion	Disagree	Disagree Strongly
----------------	-------	------------	----------	-------------------

5. The approach of instructional television is geared to the child's needs and learning ability.

Agree Strongly	Agree	No Opinion	Disagree	Disagree Strongly
----------------	-------	------------	----------	-------------------

6. The teacher should follow instructional television classes with supplementary materials and make an effort to have the television class a worthwhile learning experience.

Agree Strongly	Agree	No Opinion	Disagree	Disagree Strongly
----------------	-------	------------	----------	-------------------

QUESTIONNAIRE (continued)

7. Instructional television motivates children to read and study more.

Agree Strongly	Agree	No Opinion	Disagree	Disagree Strongly
-------------------	-------	------------	----------	----------------------

8. Instructional television disrupts classroom organization.

Agree Strongly	Agree	No Opinion	Disagree	Disagree Strongly
-------------------	-------	------------	----------	----------------------

9. Scheduling instructional television into the day's activities is difficult.

Agree Strongly	Agree	No Opinion	Disagree	Disagree Strongly
-------------------	-------	------------	----------	----------------------

10. Using instructional television allows the teacher to give more individual attention to students.

Agree Strongly	Agree	No Opinion	Disagree	Disagree Strongly
-------------------	-------	------------	----------	----------------------

11. Teachers should not be required to use instructional television.

Agree Strongly	Agree	No Opinion	Disagree	Disagree Strongly
-------------------	-------	------------	----------	----------------------

12. Students encounter learning experiences in instructional television classes that they might otherwise miss.

Agree Strongly	Agree	No Opinion	Disagree	Disagree Strongly
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13. Instructional television costs taxpayers too much money.

Agree Strongly	Agree	No Opinion	Disagree	Disagree Strongly
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QUESTIONNAIRE (continued)

14. Using instructional television requires too much preparation and follow up time for the teacher

Agree Strongly	Agree	No Opinion	Disagree	Disagree Strongly
-------------------	-------	------------	----------	----------------------

15. Teachers should be encouraged to use instructional television.

Agree Strongly	Agree	No Opinion	Disagree	Disagree Strongly
-------------------	-------	------------	----------	----------------------

16. More research should be done by instructional television on techniques that work well for TV teaching

Agree Strongly	Agree	No Opinion	Disagree	Disagree Strongly
-------------------	-------	------------	----------	----------------------

17. What group of students do you think profit least from ITV?

Fast learners	Average Learners	Slow Learners
---------------	------------------	---------------

18. How often do you use ITV this year compared to last? (Do not answer if you are a first-year teacher.)

More often	About the same amount	Less Often
------------	-----------------------	------------

19. Rate the types of programs 1, 2, 3, 4, 5 according to the way you think children prefer them: 1 being most preferable, 5 least.

_____ Science

_____ Language

_____ Art

_____ Music

_____ Social Science

QUESTIONNAIRE (continued)

20. Rate subjects you think are most successfully taught by using ITV: 1 being most successful, 5 least.

_____ Science

_____ Language

_____ Art

_____ Music

_____ Social Science

21. Do you have a television set in your room?

_____ yes _____ no

22. Do you have to take your students to another room to watch instructional television?

_____ yes _____ no

23. Do you have to share supplementary materials and guide books for instructional television with other teachers?

_____ yes _____ no

24. You may make any comments you have about instructional television or suggestions for improving it on the bottom of this page.